

REMARKS

Claims 1-3, 5-7, 9-11, 14 and 16-17 are presently pending in the captioned application. Subsequent to the enclosed amendment, claims 1-3, 5-7, 9-11, 14 and 16 are amended and claims 4, 8, 12-13 and 15 are cancelled without disclaimer or prejudice.

An in-person Interview was conducted with the Examiner on May 17, 2005, wherein an after-final amendment to the claims to include the limitation of "homogeneous" was discussed. The Examiner indicated that such an amendment may be considered because the term "homogeneous" was pending in the originally filed claims 10 and 11 and therefore a new search would not be required. That indication is acknowledged with appreciation.

Accordingly, claims 1-3, 5-7, 9-11, 14 and 16 are amended to recite that the hybrid particles are homogeneous. Support for the limitation is found in claims 10 and 11 and in the specification at page 3, line 11.

The specification has also been amended on page 6, line 19 to delete the typographical error of the term "and" appearing between the "oxide" and "organopolysiloxane". As is clearly apparent from the plain reading of the specification, the term "particle size" modifies the hybrid of "oxide·organopolysiloxane" and not separately an "oxide" or "organopolysiloxane".

No new matter within the meaning of § 132 has been added by any of the amendments.

Applicants also submit a § 1.132 Declaration by one of the inventors, Mr. Nakade, clearly showing that the known particles of the prior art are completely different from that of the presently claimed invention because the known particles are **surface** treated with methyl hydrogen polysiloxane and reactive alkylpolysiloxane whereas the particles of the present invention are comprised of **homogenously hybridized** metal oxide-organopolysiloxane.

The § 1.132 Declaration addresses the Office Action's concern that the previously submitted Fig.'s do not correspond to each other. In particular, the Fig.'s of the § 1.132 declaration correspond to each other inasmuch as each of the Fig.'s 1-3 contain an object labeled as "particle" thereby relating the known composition to that of the claimed composition.

Accordingly, Applicants respectfully request the Examiner to enter the indicated amendments of the Appendices and allow all presently pending claims.

1. Objection to the Specification

The Office Action objects to the specification in view of the

amendment filed on December 27, 2004, under § 132 as introducing new matter. The Office Action states:

The added material, which is not supported by the original disclosure, is as follows: "metal oxide·organopolysiloxane hybrid particles," the specification as originally filed states - metal oxide·organopolysiloxane hybrid powder.

Applicants respectfully traverse the rejection because the specification as originally filed does indeed recite "particle". As shown in the specification at page 6, line 19, a "particle" of metal oxide·organopolysiloxane is taught, and more specifically, the specification teaches that the size of the metal oxide·organopolysiloxane particle is from 1 nm to 1000 µm. Clearly, the specification expressly provides for the teaching of "metal oxide·organopolysiloxane hybrid particles".

Accordingly, Applicants respectfully submit that the previously filed amendment to the specification does not contain new matter within the definition of § 132 and respectfully request withdrawal of the objection to the specification.

2. Rejection of Claims 1-3, 5-7, 9-11, 14 and 16-17
under 35 U.S.C. § 112, ¶ 1

The Office Action rejects claims 1-3, 5-7, 9-11, 14 and 16-17

under 35 U.S.C. § 112, ¶ 1 as failing to comply with the written description requirement. The Office Action states:

The claim(s) contain subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant(s), at the time the application was filed, had possession of the claimed invention. The original specification does not contain "metal oxide-organopolysiloxane hybrid particles," rather metal oxide-organopolysiloxane hybrid powder was disclosed and recited.

Applicants respectfully traverse the rejection because the originally filed specification expressly teaches a "particle". Furthermore, Applicants point out that a powder is nothing more than a collection of particles. Hence, the teaching of a "particle" in addition to being expressly disclosed is also inherently disclosed by the teaching of the necessarily related "powder". Clearly, one of ordinary skill in the art would know that the inventors had possession of the presently claimed invention based on the express teaching of a particle in the specification.

Rule of Law

The first paragraph of 35 U.S.C. § 112 requires that the "specification shall contain a written description of the invention . . .". The specification must describe the claimed invention in

sufficient detail that one skilled in the art can reasonably conclude that the inventor had possession of the claimed invention.

Vas-Cath, Inc. v. Mahurkar, 935 F.2d 1550, 1563, 19 USPQ2d 1111, 1116 (Fed. Cir. 1991). Moreover, a description as filed is presumed to be adequate, unless the examiner presents sufficient evidence or reasoning to rebut the presumption. See e.g., In re Marzocchi, 439 F.2d 220, 224, 169 USPQ 367, 370 (CCPA 1971).

The examiner, therefore, must have a reasonable basis to challenge the adequacy of the written description wherein the examiner has the initial burden of proving why a person skilled in the art would not recognize a description of the invention defined by the claims. See In re Wertheim, 541 F.2d at 263-64, 191 USPQ at 97; "Guidelines for the Examination of Patent Application Under the 35 U.S.C. 112, §1, "Written Description" Requirement" Federal Register, Vol. 66, No. 4, (Friday, January 5, 2001).

Analysis

The specification expressly teaches "particles" in the specification at page 6, line 19. More specifically, the specification teaches that the size of the metal oxide·organopolysiloxane particle is from 1 nm to 1000 μm . Clearly, the specification describes the claimed invention in sufficient detail such that one skilled in the art can reasonably

conclude that the inventor had possession of the claimed invention.

Accordingly, Applicants respectfully submit that "metal oxide-organopolysiloxane hybrid particles" are supported and is therefore not new matter within the meaning of § 132 and respectfully request reconsideration and withdrawal of the rejection under § 112, ¶ 1.

2. Rejection of Claims 1-2, 5, 14 and 16 under
35 U.S.C. § 102(e)

The Office Action maintains the rejection of claims 1-2, 5, 14 and 16 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,200,580 ("Horino et al."). The Office Action states:

Applicants argue that the Horino does not teach each and every element of the chain because the particles of Horino are surface treated while the particles of the powder of the instant claims are metal oxide-organopolysiloxane hybrid wherein a silicon atom of the organopolysiloxane is covalently bonded to the metal atom through an oxygen atom. Furthermore, applicants state that the particles making up the powder of the instant claims are wholly comprised of metal oxide-organopolysiloxane hybrid in particulate form and Horino simply teaches surface coating. Also, Applicants argue that the instant particles are produced by polycondensing hydrolysis product of titanium alkoxide and organopolysiloxane derivatives with each other to form the hybrid. Applicants state that Horino first combines extender, powdered pigment, white pigment and

pearl pigment into a powdered base material that is then surface treated. Applicants then cited Verdegeal Bros. V. Union oil Co of California and in re Bond to emphasize that Horino does not disclose each and every element of the claim.

Applicants respectfully traverse the rejection and maintain the previously made argument that Horino et al. fails to teach each and every claimed limitation. Although the Office Action alleges that a corresponding schematic figure of the titanium dioxide of the Fig. 1 of the Response of December 27, 2004, is not provided with respect to the presently claimed hybrid particle of Fig. 2, Applicants note that all of the previously filed Fig.'s correspond to each other inasmuch as each represents a single particle of the respective prior art and presently claimed particle. However, in response to the Examiner's concerns, Applicants present new Fig.'s in a § 1.132 Declaration explicitly labeling each of the objects in the Fig.'s as a "particle" thereby corresponding each Fig. to the other.

Applicants reiterate that the invention of Horino et al. does not anticipate the presently claimed invention because the particles of Horino et al. are **surface** treated with methyl hydrogen polysiloxane and reactive alkylpolysiloxane whereas the particles of the powder of the present invention are homogenously hybridized

metal oxide·organopolysiloxane particles having a silicon atom of the organopolysiloxane bonded by a covalent bond with a metal atom through an oxygen atom. In other words, the particles making up the powder of the present invention are wholly comprised of a metal oxide·organopolysiloxane hybrid in particulate form whereas Horino et al. only teaches surface coating a base particle to form the powder.

Clearly, one of ordinary skill in the art would not have been able to make the presently claimed metal oxide·organopolysiloxane homogenously hybridized particles from the teachings of Horino et al. without expenditure of his own inventive effort.

The rule of law

The Federal Circuit has spoken clearly and at some length on the question of anticipation. Anticipation requires that each and every element of the claimed invention be disclosed in a single prior art reference. Verdegaal Bros. v. Union Oil Co. of California, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Those elements must be expressly disclosed as in the claim. In re Bond, 15 USPQ2d 1566 (Fed. Cir. 1990).

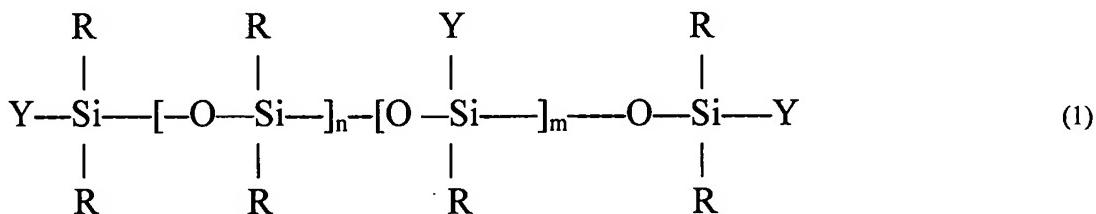
The prior art reference must also be enabling, thereby placing the allegedly disclosed matter in the possession of the public. In

re Brown, 329 F.2d 1006, 1011, 241 USPQ 245, 249 (C.C.P.A. 1964). In order to accomplish this, the reference must be so particular and definite that from it alone, without experiment or the exertion of his own inventive skill, any person versed in the art to which it pertains could construct and use it. Id. at 250.

Finally, the Federal Circuit has made clear that a negative pregnant is not enough to show anticipation. Rowe v. Dror, 112 F.3d 473, 42 USPQ2d 1550 (Fed. Cir. 1997). Thus, where a reference does not explicitly describe anything inconsistent with a claimed use, if that reference nevertheless fails to make an affirmative suggestion of the claimed limitations, that reference cannot anticipate the claimed use. Id.

Amended claim 1

In the present application, amended claim 1 recites a powder, comprising metal oxide-organopolysiloxane homogenous hybrid particles wherein a silicon atom of the compound which forms residue group represented by general formula (1),



wherein, R is an alkyl group selected from the group

consisting of a methyl group, an ethyl group and a propyl group, a phenyl group and can be same or can be different, Y is a group represented by -R or -R¹-Si(-O-)₃, wherein R¹ is an alkylene group of carbon number 1-5, and can be same or can be different and at least one is -R¹-Si(-O-)₃, n=1-100 and m=0-5 is bonded by covalent bond with a metal atom through an oxygen atom.

Analysis

The presently claimed particles are produced by polycondensing the hydrolysis products of titanium alkoxide and organopolysiloxane derivatives with each other to form a hybrid sol. The titanium oxide and organopolysiloxane are homogenously formed such that a phase separation cannot be observed in the particle when observed by an optical microscope.

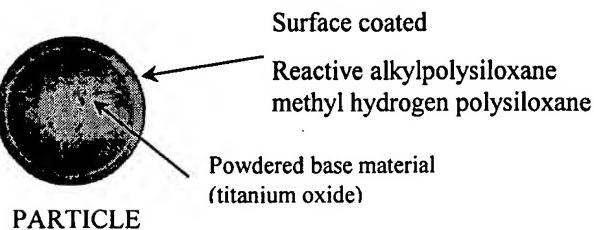
Horino et al., on the other hand, teaches making a powder by first combining an extender, a compound powdered pigment, a white pigment, a colored pigment and a pearl pigment into a powdered base material that is then **surface-treated** with methyl hydrogen polysiloxane and reactive alkylpolysiloxane. Therefore, the surface-treated particles of Horino et al. has a completely different structure from the particles of the present invention

wherein the metal oxides and silicone chains of Horino et al. are not homogenously hybridized as in the presently claimed invention.

Applicants emphasize that the particles of the claimed invention are wholly comprised of metal oxide-organopolysiloxane hybrid both inside and out and not just on the surface as is taught by Horino et al. In particular, Horino et al. only teaches a powdered base material treated with organic silicon compounds affixed onto the surface thereof. See Horino et al. at col. 4, lines 55-62. The powdered base material of Horino et al. itself is made up of an organic and inorganic powdered base material, which in turn includes a pigment. See id. at col. 5, lines 15-22. The pigment includes an extender, a compound powdered pigment, a white pigment, a colored pigment, a pearl pigment and the like. The powdered base material is then surface-treated with methyl hydrogen polysiloxane and reactive alkylpolysiloxane. See id. at col. 13, lines 10-18.

The following Fig. 1 shows the surface-treated powdered base material treated with organic silicon compounds of Horino et al.

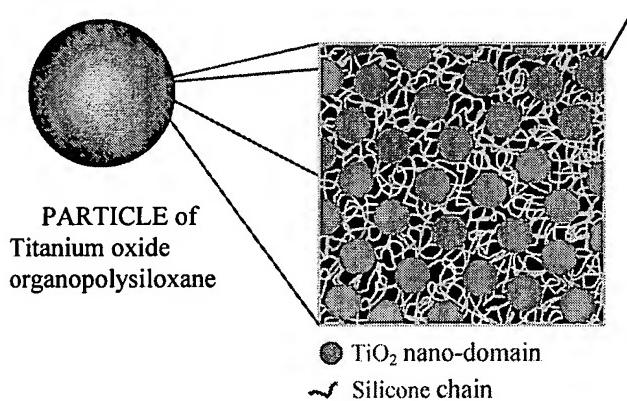
Fig. 1



In contrast, the presently claimed homogenous particle has organopolysiloxane bonded with metal oxide. As shown in the exploded portion of the following Fig. 2, the nano-domain of titanium oxide are bonded with silicone chain and make up the particle rather than being adhered onto the surface of the powdered base material as taught by Horino et al. Further, there are covalent bonds between the nano-domain of titanium oxide and the silicone chains. In other words, the particles of the claimed invention are comprised of a metal oxide-organopolysiloxane hybrid as shown by Fig 2.

Fig. 2

Schematic figure of titanium oxide-organopolysiloxane hybrid



The Fig.'s 1 and 2 shown here differs from the previously submitted Fig.'s 1 and 2 in the Response of December 27, 2005, inasmuch as the circular object in each is labeled as a "particle".

Hence, the indication of "particle" for each of the Fig.'s addresses the Examiner's concerns that the previously filed Fig.'s do not correspond to each other.

In view of above, it is clear that one of ordinary skill in the art would not have been able to make the presently claimed metal oxide·organopolysiloxane homogenously hybridized particles based on the teachings of Horino et al. because Horino et al. only teaches surface-coating a powdered base material. See Horino et al. at col. 13, line 10. Horino et al. clearly fails to teach each and every claimed limitation insofar as the structure is completely different from that of the claimed invention. Therefore, a *prima facie* case of anticipation has not been established.

Accordingly, Applicants respectfully submit that claims 1-2, 5, 14 and 16 are unanticipated over Horino et al. and request reconsideration and withdrawal of the outstanding rejection under § 102(e).

3. Rejection of Claims 1-3, 5-7, 9-10 and 14 under
35 U.S.C. 102(b)

The Office Action maintains the rejection of claims 1-3, 5-7, 9-10, and 14 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,843,525 ("Shibasaki et al."). The Office Action

states:

Applicants argue there is no metal-oxygen-silicon bond in Shibasaki and as such Shibasaki does not disclose each and every element of the claims. Applicants also compared figure 3 (prior) with figure 4 (instant claims) to emphasize the absence of a metal-organopolysiloxane hybrid in the prior art.

Applicants respectfully traverse the rejection and maintain the previously made argument that Shibasaki et al. fails to teach each and every claimed limitation. Although the Office Action alleges that a corresponding schematic figure of the titanium dioxide of the Fig. 3 of the Response of December 27, 2004, is not provided with respect to the presently claimed hybrid particle of Fig. 4, Applicants note that all of the previously filed Fig.'s correspond to each other inasmuch as each represents a single particle of the respective prior art and presently claimed particle. However, in response to the Examiner's concerns, Applicants present new Fig.'s in a § 1.132 Declaration explicitly labeling each of the objects in the Fig.'s as a "particle" thereby corresponding each Fig. to the other.

Applicants reiterate that the invention of Shibasaki et al. is completely different from that of the presently claimed invention because Shibasaki et al. teaches **surface**-modified metal oxide fine

particles obtained by hydrophobic treatment of the metal oxide fine particles with a silane coupling agent. The Abstract of Shibasaki et al. clearly states "the organopolysiloxane is stably bonded to the **surface** of the power particles."

In contrast, the particles of the powder of the present invention are a metal oxide·organopolysiloxane homogenous hybrid wherein a silicon atom of the organopolysiloxane is bonded by a covalent bond with a metal atom through an oxygen atom. In other words, the particles are wholly comprised of a metal oxide·organopolysiloxane homogenous hybrid in particulate form whereas Shibasaki et al. simply teaches surface coating a base particle to form the powder. See Abstract.

Clearly, one of ordinary skill in the art would not have been able to make the presently claimed metal oxide·organopolysiloxane homogenously hybridized powder from the teachings of Shibasaki et al. without expenditure of his own inventive effort.

The rule of law

The Federal Circuit has spoken clearly and at some length on the question of anticipation. Anticipation requires that each and every element of the claimed invention be disclosed in a single prior art reference. Verdegaal Bros. v. Union Oil Co. of

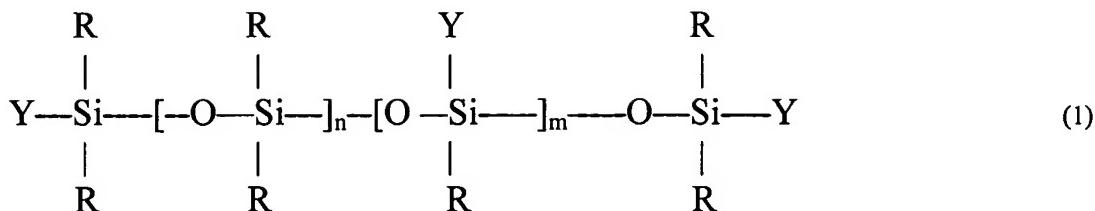
California, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Those elements must be expressly disclosed as in the claim. In re Bond, 15 USPQ2d 1566 (Fed. Cir. 1990).

The prior art reference must also be enabling, thereby placing the allegedly disclosed matter in the possession of the public. In re Brown, 329 F.2d 1006, 1011, 241 USPQ 245, 249 (C.C.P.A. 1964). In order to accomplish this, the reference must be so particular and definite that from it alone, without experiment or the exertion of his own inventive skill, any person versed in the art to which it pertains could construct and use it. Id. at 250.

Finally, the Federal Circuit has made clear that a negative pregnant is not enough to show anticipation. Rowe v. Dror, 112 F.3d 473, 42 USPQ2d 1550 (Fed. Cir. 1997). Thus, where a reference does not explicitly describe anything inconsistent with a claimed use, if that reference nevertheless fails to make an affirmative suggestion of the claimed limitations, that reference cannot anticipate the claimed use. Id.

Amended claim 1

In the present application, amended claim 1 recites a powder, comprising metal oxide-organopolysiloxane homogenous hybrid particles wherein a silicon atom of the compound which forms residue group represented by general formula (1),



wherein, R is an alkyl group selected from the group consisting of a methyl group, an ethyl group and a propyl group, a phenyl group and can be same or can be different, Y is a group represented by -R or $-\text{R}^1-\text{Si}(-\text{O}-)_3$, wherein R^1 is an alkylene group of carbon number 1-5, and can be same or can be different and at least one is $-\text{R}^1-\text{Si}(-\text{O}-)_3$, n=1-100 and m=0-5 is bonded by covalent bond with a metal atom through an oxygen atom.

Analysis

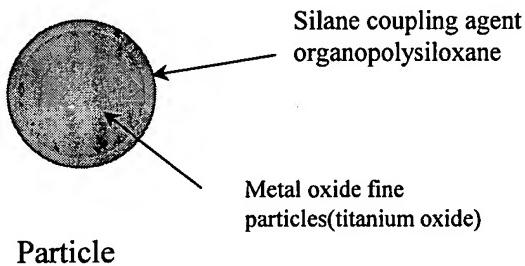
The presently claimed particles are produced by polycondensing the hydrolysis products of titanium alkoxide and organopolysiloxane derivatives with each other to form a hybrid sol. The titanium oxide and organopolysiloxane are homogenously formed such that a phase separation cannot be observed in the particle when observed by an optical microscope.

Shibasaki et al., on the other hand, teaches surface-modified metal oxide fine particles obtained by hydrophobic treatment of metal oxide fine particles with a silane coupling agent and then treating the metal oxide fine particles at each terminus with a

reactive group sealing type organopolysiloxane. See Shibasaki et al. at col. 2, lines 19-27. Example 2 of Shibasaki et al. teaches a super fine titanium oxide particle treated by octyltrimethoxysilane to impart a hydrophobic property. See Shibasaki et al. at col. 6, lines 43-55. The particles are then treated with α , ω -dihydroxydimethyl-polysiloxane.

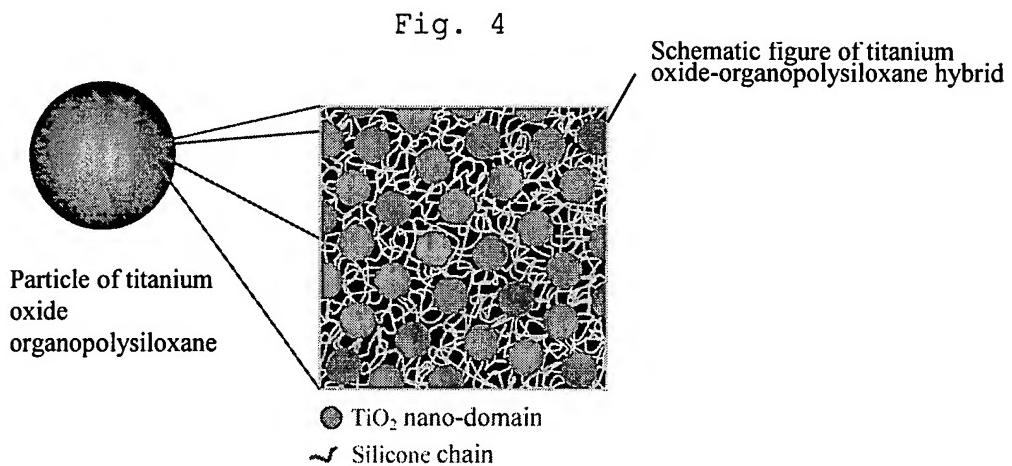
In other words, Shibasaki et al. relates to a surface-treated powder to which a silane coupling agent is adhered wherein each terminus reactive group sealing type organopolysiloxane is reacted as shown by the following Fig. 3.

Fig. 3



In contrast, the presently claimed powder is comprised of homogenously hybridized particles wherein organopolysiloxane is bonded with the metal oxide. As shown in the exploded portion of the following Fig. 4, the nano-domain of titanium oxide are bonded with the silicone chain and make up the particle rather than being

adhered onto the surface of the powdered base material as taught by Shibasaki et al. Further, there are covalent bonds between the nano-domain of titanium oxide and the silicone chains. In other words, the particles of the claimed invention are comprised of a metal oxide-organopolysiloxane hybrid as shown by Fig 4.



The Fig.'s 3 and 4 shown here differs from the previously submitted Fig.'s 3 and 4 in the Response of December 27, 2005, inasmuch as the circular object in each is labeled as a "particle". Hence, the indication of "particle" for each of the Fig.'s addresses the Examiner's concerns that the previously filed Fig.'s do not correspond to each other.

Clearly, one of ordinary skill in the art would not have been able to make the presently claimed metal oxide-organopolysiloxane homogenously hybridized particles based on the teachings of Shibasaki et al. because the reference only teaches surface-coating

a powdered base material. Given that the interactions take place on the surface of the formed powdered base material, the method taught by Shibasaki et al. would not result in a homogenously hybridized powder of the claimed invention. Shibasaki et al. clearly fails to teach each and every claimed limitation insofar as the structure is completely different from that of the claimed invention. Therefore, a *prima facie* case of anticipation has not been established.

Accordingly, Applicants respectfully submit that claims 1-3, 5-7, 9-10 and 14 are unanticipated over Shibasaki et al. and request reconsideration and withdrawal of the outstanding rejection under § 102(b).

4. Rejection of Claims 3, 10-11 and 17 under
35 U.S.C. § 103(a)

The Office Action maintains the rejection of claims 3, 10-11 and 17 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,200,580 ("Horino et al."). The Office Action states:

Applicants argue that Horino does not teach each and every claimed limitation because the particles of Horino are surface treated while the instant particles are hybrid of metal and organopolysiloxane. That the instant hybridized particles allow the refractive index to be controlled without altering the

powder shape or particle size and water repellency, dispersing ability and stability can be improved.

Applicants respectfully traverse the rejection because Horino et al. fails to establish a *prima facie* case of obviousness. Although the Office Action alleges that a corresponding schematic figure of the titanium dioxide of the Fig. 5 of the Response of December 27, 2004, is not provided with respect to the presently claimed hybrid particle of Fig. 6, Applicants note that all of the previously filed Fig.'s correspond to each other inasmuch as each represents a single particle of the respective prior art and presently claimed particle. However, in response to the Examiner's concerns, Applicants present new Fig.'s in a § 1.132 Declaration explicitly labeling each of the objects in the Fig.'s as a "particle" thereby corresponding the prior art particle to the presently claimed particle.

With regard to substantive argument, Applicants reiterate that Horino et al. fails to teach each and every claimed limitation of the presently claimed invention. The particles of Horino et al. are **surface** treated with methyl hydrogen polysiloxane and reactive alkylpolysiloxane whereas the particles of the powder of the present invention are a metal oxide-organopolysiloxane hybrid wherein a silicon atom of the organopolysiloxane is bonded by a

covalent bond with a metal atom through an oxygen atom.

The presently claimed homogenously hybridized particles also unexpectedly allow for controlling the refractive index without altering the powder shape or particle size while retaining desirable porosity, mechanical and optical properties. The dispersing ability, dispersing stability and water repellency can be further improved. The present invention particles also have elastic properties such that the "hard feeling" of known metal oxide powder is not present in the presently claimed powder. Clearly, the presently claimed invention is unobvious over the teachings of Horino et al.

The rule of law

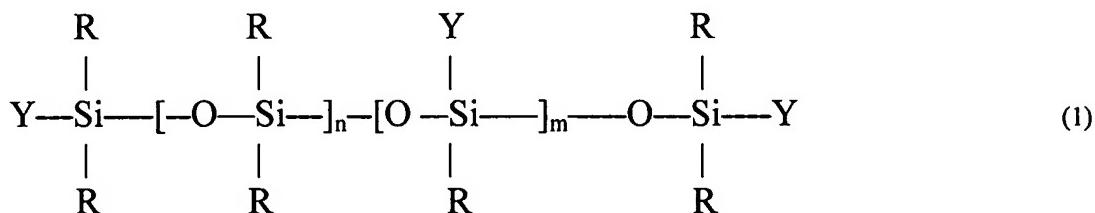
The Federal Circuit held that a *prima facie* case of obviousness must establish: (1) some suggestion or motivation to modify the references; (2) a reasonable expectation of success; and (3) that the prior art references teach or suggest all claim limitations. Amgen, Inc. v. Chugai Pharm. Co., 18 USPQ2d 1016, 1023 (Fed. Cir. 1991); In re Fine, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988); In re Wilson, 165 USPQ 494, 496 (C.C.P.A. 1970).

Even if a *prima facie* case of obviousness has been established, secondary considerations such as commercial success,

long felt but unsolved need, failure of others, and unexpected results may nevertheless give rise to a patentable invention. Graham v. John Deere Co., 148 U.S.P.Q. 459 (1966). Where the claimed and prior art products are substantially similar, a *prima facie* case of obviousness can also be rebutted by demonstrating that the prior art products do not possess the characteristics of the claimed invention. In re Best, 196 U.S.P.Q. 430, 433 (C.C.P.A. 1977).

Amended claim 1

In the present application, amended claim 1 recites a powder, comprising metal oxide-organopolysiloxane homogenous hybrid particles wherein a silicon atom of the compound which forms residue group represented by general formula (1),



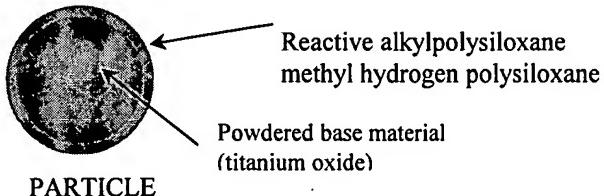
wherein, R is an alkyl group selected from the group consisting of a methyl group, an ethyl group and a propyl group, a phenyl group and can be same or can be different, Y is a group represented by -R or $-R^1-\text{Si}(-\text{O}-)_3$, wherein R^1 is an alkylene group of carbon number 1-5, and can be same or can be different and at

least one is $-R^1-Si(-O-)_3$, n=1-100 and m=0-5 is bonded by covalent bond with a metal atom through an oxygen atom.

Analysis

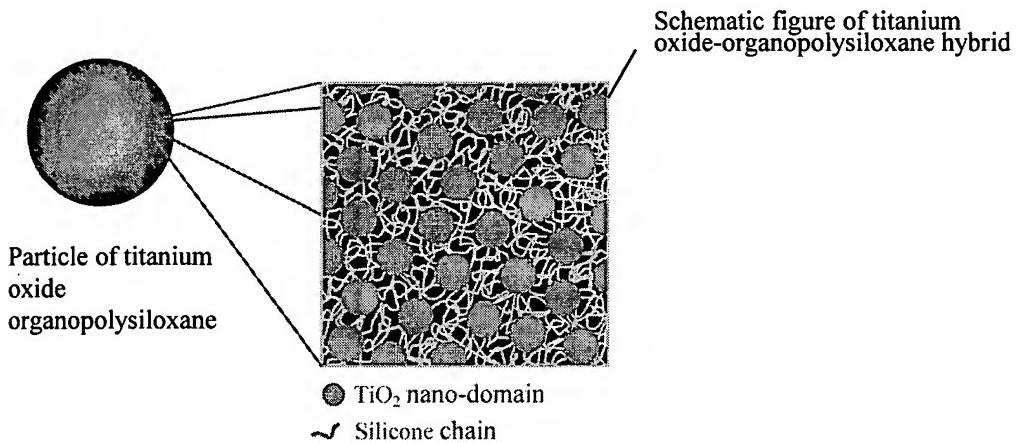
Horino et al. fails to teach the presently claimed homogenously hybridized particles and instead teaches a powdered base material treated with organic silicon compounds affixed onto the surface thereof. See Horino et al. at col. 4, lines 55-62. The powdered base material of Horino et al. is itself made up of an organic and inorganic powdered base material, which in turn includes a pigment. See id. at col. 5, lines 15-22. The pigment includes an extender, a compound powdered pigment, a white pigment, a colored pigment, a pearl pigment and the like. The powdered base material is then surface-treated with methyl hydrogen polysiloxane and reactive alkylpolysiloxane. See id. at col. 13, lines 10-18. The following Fig. 5 shows the surface-treated powdered base material treated with organic silicon compounds of Horino et al.

Fig. 5



In contrast, the presently claimed powder is comprised of homogenously hybridized particles wherein organopolysiloxane is bonded with the metal oxide. As shown in the exploded portion of the following Fig. 6, the nano-domain of titanium oxide are bonded with the silicone chain and make up the particle rather than being adhered onto the surface of the powdered base material as taught by Horino et al. Further, there are covalent bonds between the nano-domain of titanium oxide and the silicone chains. In other words, the particles of the claimed invention are comprised of a metal oxide-organopolysiloxane hybrid as shown by Fig. 6.

Fig. 6



The Fig.'s 5 and 6 shown here differs from the previously submitted Fig.'s 5 and 6 in the Response of December 27, 2005, inasmuch as the circular object in each is labeled as a "particle". Hence, the indication of "particle" for each of the Fig.'s

addresses the Examiner's concerns that the previously filed Fig.'s do not correspond to each other.

Clearly, one of ordinary skill in the art would not have been able to make the presently claimed metal oxide-organopolysiloxane homogenously hybridized particles based on the teachings of Horino et al. because Horino et al. only teaches surface-coating a powdered base material. See Horino et al. at col. 13, line 10.

Moreover, the presently claimed invention unexpectedly allows for controlling the refractive index without altering the powder shape or particle size while retaining desirable porosity, mechanical and optical properties. The dispersing ability, dispersing stability and water repellency can be further improved. The particles of the claimed invention also have elastic properties such that the "hard feeling" of known metal oxide powder is not present in the presently claimed powder.

On the other hand, the surface-treated powdered base material of Horino et al. has a completely different structure from the powder of the present invention wherein the metal oxides and silicone chains of Horino et al. are only surface coated on an organic and inorganic powdered base material and possess the known problems of a high refractive index, undesirable cohesion and wettability. Clearly, a *prima facie* case of obviousness has not

been established.

Accordingly, Applicants respectfully submit that claims 3, 10-11 and 17 are unobvious over Horino et al. and request reconsideration and withdrawal of the outstanding rejection under § 103(a).

CONCLUSION

In light of the foregoing, Applicants submit that the application is now in condition for allowance. The Examiner is therefore respectfully requested to reconsider and withdraw the rejection of the pending claims and allow the pending claims. Favorable action with an early allowance of the claims pending is earnestly solicited.

Respectfully submitted,

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